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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,434	02/25/2004	Masakazu Adachi	MTS-3507US	2802
23122	7590	05/16/2005	EXAMINER	
RATNERPRESTIA			CABUCOS, MARIE G	
P O BOX 980			ART UNIT	
VALLEY FORGE, PA 19482-0980			PAPER NUMBER	

2821

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/786,434

Applicant(s)

ADACHI ET AL.

Examiner

Marie Antoinette Cabucos

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-12, 15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 5-7, 13, 14, 16 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/24/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 8-12, 15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kemmochi et al (2004/0032706) in view of Asano et al (2002/0024375).

Claims 1-3, 19 and 20, except for switch being provided by a semiconductor and having a shunt circuit, Kemmochi discloses an antenna switch module comprising a switch circuit for switching between transmitting and/or receiving of a signal between an antenna and a transmitting portion (TX) and/or receiving portion (RX) provided to a dielectric layered body and remaining elements of switch circuit are provided to a semiconductor chip mounted on dielectric layered body. (See figure 1 and page 2, paragraph 0014). Asano discloses of a semiconductor switching device with shunt circuitry (page 2, paragraph 0016). It would have been obvious by one having ordinary skill in the art, at the time of the invention, to make the antenna switch device of Kemmochi with the semiconductor switching device of Asano for a faster switching speed.

Claim 4, Kemmochi discloses of chips being mounted by wire bonding (page 13, paragraph 0171).

Claims 8-10, the combination of electrode patterns as recited are disclosed in Kemmochi (see figures 21 and 22).

Claims 11-12, pair of field effect transistors are disclosed in Asano as shown in figure 8.

Claims 15, 17-18, an all-in-one communication device comprising the antenna switch module according to claim 1, a low-pass filter of transmitting portion, and a power amplifier for supplying a transmitting signal to low-pass filter is taught in Kemmochi as shown in figure 38. Kemmochi also discloses of antenna being connected to switch in figure 36.

***Allowable Subject Matter***

2. Claims 5-7, 13-14, 16 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 5-7 and 21, limitation of capacitor being formed between electrode pattern.

Claims 13-14, limitation of a combination of electrode patterns of certain dielectric layered body forming one high-frequency filter or a plurality of high-frequency filters.

Claim 16, limitation of a voltage-controlled oscillator.

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### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patents of Hayakawa et al (6,862,436) and Tanaka et al (5,774,792) and US publications of Kushitani et al (2004/0075491) and Zipper et al (2004/0113713) teaches similar devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie Antoinette Cabucos whose telephone number is 571-272-8582. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marie Antoinette Cabucos  
5/10/2005

  
Don Wong  
Supervisory Patent Examiner  
Technology Center 2800